## **EAST Search History**

| Ref<br>#  | Hits | Search Query   | DBs                          | Default<br>Operator | Plurals | Time Stamp       |
|-----------|------|--|------------------------------|---------------------|---------|------------------|
| S1        | 1064 | (277/434,437,459,460,464,465,472,).<br>CCLS.   | US-PGPUB;<br>USPAT           | OR                  | OFF     | 2007/08/22 18:21 |
| S2        | 29   | ("0345767"   "2224338"   "2311728"   "2334243"   "2764458"   "2905512"   "3026219"   "3191946"   "3206219"   "3653670"   "3683477"   "3752490"   "3921988"   "4045036"   "4079949"   "4099730"   "4139205"   "4497497"   "5265890"   "5603512").PN. OR ("6655697").URPN. | US-PGPUB;<br>USPAT;<br>USOCR | OR                  | OFF     | 2007/03/26 14:49 |
| S3        | 5    | ("2368137").PN. OR ("4371174").<br>URPN.   | US-PGPUB;<br>USPAT;<br>USOCR | OR                  | OFF     | 2007/03/26 14:58 |
| <b>S4</b> | 0    | ("2668088").URPN.  | USPAT                        | OR                  | OFF     | 2007/03/26 15:18 |
| S5        | 0    | ("1999494").URPN.  | USPAT                        | OR                  | OFF     | 2007/03/26 15:26 |
| S6        | 0    | ("1999494").URPN.  | USPAT                        | OR                  | OFF     | 2007/03/26 15:26 |
| S7        | 1240 | (oil adj2 ring) same piston  | US-PGPUB;<br>USPAT           | OR                  | ON      | 2007/03/26 15:37 |
| S8        | 24   | S7 and spring same (wave or sine)  | US-PGPUB;<br>USPAT           | OR                  | ON      | 2007/03/26 15:38 |
| S9        | 1087 | (oil adj2 ring) same piston  | EPO; JPO;<br>DERWENT         | OR                  | ON      | 2007/03/26 15:37 |
| S10       | 6    | S9 and spring same (wave or sine)  | EPO; JPO;<br>DERWENT         | OR                  | ON      | 2007/03/26 15:38 |
| S11       | 5    | ("2368137").PN. OR ("4371174").<br>URPN.   | US-PGPUB;<br>USPAT;<br>USOCR | OR                  | OFF     | 2007/03/26 16:21 |
| S12       | 17   | 277/472  | US-PGPUB;<br>USPAT           | OR                  | OFF     | 2007/03/26 16:22 |
| S13       | 83   | (277/472).CCLS.  | USPAT                        | OR                  | OFF     | 2007/03/26 16:22 |

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| Ref<br># | Hits | Search Query  | DBs                          | Default<br>Operator | Plurals | Time Stamp       |
|----------|------|---|------------------------------|---------------------|---------|------------------|
| L2       | 1    | (10/479372).APP.  | USPAT;<br>USOCR              | OR                  | OFF     | 2007/08/22 18:09 |
| L3       | 28   | ("1327801"   "2291945"   "2346897"   "2452503"   "2511874"   "2657962"   "2754165"   "2848288"   "3241219"   "3326561"   "3822973"   "4099730"   "4452464"   "4629200"   "4669369"   "5295696"   "5788246"   "6793222"). PN. OR ("7252292").URPN. | US-PGPUB;<br>USPAT;<br>USOCR | OR                  | OFF     | 2007/08/22 18:10 |
| L4       | 5    | ("2368137").PN. OR ("4371174").<br>URPN.  | US-PGPUB;<br>USPAT;<br>USOCR | OR                  | OFF     | 2007/08/22 18:15 |
| L5       | 4583 | (oil or piston) same ring same spring same (recess or channel)  | US-PGPUB;<br>USPAT           | OR                  | ON      | 2007/08/22 18:16 |
| L6       | 101  | (oil or piston) same ring same spring same (recess or channel) same (wave or sine)  | US-PGPUB;<br>USPAT           | OR                  | ON      | 2007/08/22 18:20 |
| L7       | 0    | ("2007/0080502").URPN.  | USPAT                        | OR                  | OFF     | 2007/08/22 18:17 |
| L8       | 2    | (oil or piston) same ring same spring same (recess or channel) same (wave or sine)  | EPO; JPO;<br>DERWENT         | OR                  | ON      | 2007/08/22 18:20 |
| L9       | 1069 | (277/434,437,459,460,464,465,472,).<br>CCLS.  | US-PGPUB;<br>USPAT           | OR                  | OFF     | 2007/08/22 18:23 |
| L11      | 0    | oil same ring same recess same spring same sine same (phase-shift\$3) same surface  | US-PGPUB;<br>USPAT           | OR                  | ON      | 2007/08/22 18:25 |
| L12      | 0    | oil same ring same recess same spring same sine same shifted same surface   | US-PGPUB;<br>USPAT           | OR                  | ON      | 2007/08/22 18:25 |